

## The Evolution of Barbellus Part B

### Procedure:

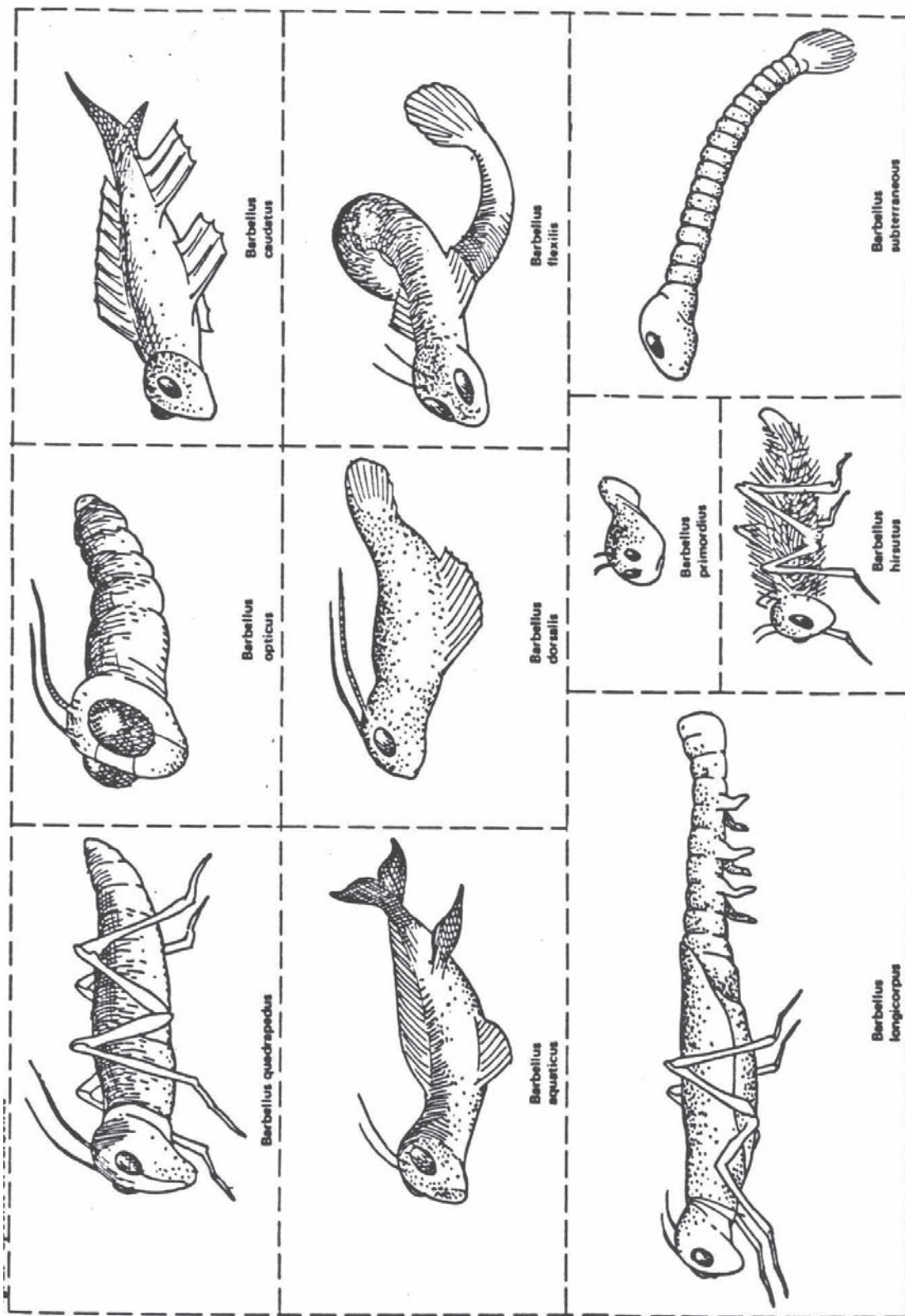
1. Cut out the drawings in Fig. 2, making sure each creature's name remains with the picture.
2. Arrange the cut outs on a piece of paper to show the sequence of changes that you think might have taken place in the genus *Barbellus*.
3. Use Fig. 1 to decide on the relative ages of the species. Make sure that your arrangement agrees with the relative ages of the fossils.
4. When all in your group are satisfied with the arrangement, tape each fossil and draw the branches of your evolutionary tree.

### Discussion:

1. Which layer (designated by layers A-F) is the oldest?

Which fossils would be the oldest?

2. Why does the specimen *B. opticus* not appear above layer E?
3. Since specimen *B. subterraneus* does not appear until rock layer A, where did it come from?
4. Name the physical features that you used to group your organisms.
5. Write an essay that explains the evolution of *Barbellus* in terms of changes in anatomy and their causes. Their structure should show adaptations to their environment (such as fins for swimming) so be sure to include this in your explanation.



5. Figure 2